

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/003907

A CLASSIFICATION OF SUBJECT MATTER
C01B31/28 A61K51/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

COIB

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No |
|----------|---|----------------------|
| X | BRINKMAN, G. A. ET AL: "Preparation of [HC] -phosgene" INTERNATIONAL JOURNAL OF APPLIED RADIATION AND ISOTOPES CODEN: IJARAY; ISSN: 0020-708X, vol. 29, no. 11, 1978, pages 701-702, XP008049781 the whole document | 1, 3-7 |
| Y | ----- | 2 |
| X | PATENT ABSTRACTS OF JAPAN vol. 1998, no. 10, 31 August 1998 (1998-08-31) & JP 10 135233 A (SONY CORP), 22 May 1998 (1998-05-22) abstract ----- | 8, 9 |
| | -/- | |

Further documents are listed in the continuation of box C

Patent family members are listed in annex

* Special categories of cited documents

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

5 September 2005

Date of mailing of the international search report

23. 11. 2005

Name and mailing address of the ISA

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| C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|---|----------------------|
| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No |
| Y | WO 02/102711 A (KIHLBERG, TOR; LAANGSTROEM, BENGT) 27 December 2002 (2002-12-27) cited in the application claims 1,5,6 ----- | 2 |
| X | EP 0 282 703 A (USHIO ELECTRIC INC; USHIO DENKI) 21 September 1988 (1988-09-21) figure 1 column 4, line 27 - line 45 ----- | 8, 9 |
| A | DIKSIC, MIRKO ET AL: "An on-line synthesis of "no-carrier-added" [HC] phosgene" INTERNATIONAL JOURNAL OF NUCLEAR MEDICINE AND BIOLOGY , 9(4), 283-5 CODEN: IJNMCI; ISSN: 0047-0740, 1982, XP008049737 the whole document ----- | 1-12 |
| A | ROEDA D ET AL: "A U.V.-INDUCED ON-LINE SYNTHESIS OF HC-PHOSGENE AND THE PREPARATION OF SOME OF ITS DERIVATIVES" INTERNATIONAL JOURNAL OF APPLIED RADIATION AND ISOTOPES, PERGAMON PRESS LTD. OXFORD, GB, vol. 32, 1981, pages 931-932, XP008049780 cited in the application the whole document ----- | 1-12 |
| A | CROUZEL C ET AL: "11C-LABELED PHOSGENE: AN IMPROVED PROCEDURE AND SYNTHESIS DEVICE" INTERNATIONAL JOURNAL OF APPLIED RADIATION AND ISOTOPS, PERGAMON PRESS, NEW YORK, NY, US, vol. 34, no. 11, 1983, pages 1558-1559, XP001147857 ISSN: 0020-708X the whole document ----- | 1-12 |
| E | WO 2005/042441 A (AMERSHAM PLC; KIHLBERG, TOR; ITSENKO, OLEKSIY; FERM, TOMMY; LANGSTROM,) 12 May 2005 (2005-05-12) claims 8-11 ----- | 8-12 |

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons

1 Claims Nos because they relate to subject matter not required to be searched by this Authority, namely

2 Claims Nos because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically

3 **D** Claims Nos because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 64(a)

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows

see additional sheet

1 As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims

2 As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee

3 As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims from which fees were paid.

4 No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims it is covered by claims Nos

1-12

Remark on Protest

The additional search fees were accompanied by the applicants protest

No protest accompanied the payment of additional search fees

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims : 1-12

The problem solved by the first invention is to provide:

- a process for the preparation of labeled phosgene using the reaction of carbon-¹³ isotope monoxide enriched gas-mixture with chlorine gas, this reaction being induced by uv radiation
- a system (apparatus) for performing this labeling synthesis

2. claims : 13-25

The problem solved by the second invention is to provide:

- a process for radiolabeling comprising reaction of carbon-¹³ isotope labeled phosgene with compounds respectively of formulae (I) and (II) to give a labeled compound of formula (III) (see claim 13)
- the carbon-¹³ isotope labeled compound so obtained
- a kit for positron emission tomography (PET) study comprising a carbon-¹³ isotope labeled compound of formula (III) (see claim 20)

In case of search of the second invention demonstrates that compound of formula (III) already exists, then a non-unity "a posteriori" will be raised between claims 13 and 20.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB2004/003907

| Patent document cited in search report | | Publication date | | Patent family member(s) | | Publication date |
|--|---|------------------|------|---|--|--|
| JP 10135233 | A | 22-05-1998 | NONE | | | |
| wo 02102711 | A | 27-12-2002 | | CA 2448524 A1 EP 1406835 A1 JP 2004532787 T US 2004197257 A1 | | 27-12-2002 14-04-2004 28-10-2004 07-10-2004 |
| EP 0282703 | A | 21-09-1988 | | DE 3861522 D1 US 4900938 A | | 21-02-1991 13-02-1990 |
| WO 2005042441 | A | 12-05-2005 | NONE | | | |